

### **REMARKS**

Applicants have now had an opportunity to carefully consider the Examiner's comments set forth in the Office Action of August 22, 2007.

Entry of the included amendment and reconsideration of the Application is requested.

### **The Subject Embodiments**

As previously discussed in the Applicants' response dated June 7, 2007, the subject embodiments are directed to a distributed image processing system typically including a plurality of imaging devices (i.e., printers or copy stations) in network communication with an asset management system and services host system which are capable of communicating with the imaging devices to assess performance and provide application programs. The imaging devices are typically remote from both the asset management system and the services host system. A feature of the subject embodiments is that the deployed imaging devices include a Device Model Agent (DMA) disposed within the imaging devices for interactive communication between the asset management system and services host system functioning as an interface layer that provides a common view of device data, event and operations to system management applications. More particularly, the DMA module includes a first DMA application for monitoring imaging device events and prescribing corresponding actions and a second DMA application for performing dynamic updates of executable imaging device services. A service management component of the DMA module selectively cooperates with the first and second DMA applications and facilitates the interactive communication with the asset managing system and services host system so that the DMA module enables imaging device active participation in the service applications. This active participation includes the imaging device actively subscribing to and adding new service components to the imaging device. Such active participation is to be contrasted with mere resident data storage and communication.

The Device Model Agent (DMA), the "device side" technology module in Device Centric Services (DCS) platform is a thin, efficient applications/services execution environment. The DMA provides a flexible, extensible, dynamic services management

system allowing e-services to be designed, added, and managed within an imaging system without modifying the DCS platform itself.

The Device Model Agent as described herein adds the following capabilities to document system devices. The unique combination of these capabilities enables several benefits related to system management application development, deployment, and maintenance.

1. Active participation in applications and services offerings (post-sale, system management, and other services)

The devices that embed the DMA module can perform several computational tasks required in system management applications and services. In this architecture an application server (e.g., installed in customer environment or a Xerox back office server) and the target device collaborate to complete system management offerings. The DMA provides a service execution environment where a service may run as a whole or be part of a system management application running on an application server.

The DMA services are capable of performing the following tasks.

- Monitor device events and take prescribed actions
- Publish data to subscribers upon occurrence of an event of interest
- Invoke methods (such as diagnostic routines) on the device as directed by external clients.

2. Dynamic updates of services and support components

Operating within the end-to-end DCS platform the devices that embed DMA module can add new service components dynamically. It allows a customer or application components already on the device to request such additions to support services. It allows the addition (or deletion) of components as needed and without system or DMA recompilation or restart. The target device itself initiates the additions of a new or upgraded service as a whole or supporting components for existing services. Thus in the system described herein the device is now responsible for initiating the activity to maintain itself and system management services running on it.

3. Device Independent Applications

Present embodiments recognize the need for an application/services execution environment to enable developers to work with consistent and standards-based tool sets. The DMA module enables the development of device independent post-sale applications. Applications written using DMA interfaces do not have to change to accommodate new or upgraded (DMA enabled) devices. While DMA implements model-based approach espoused by DMTF for achieving device independence for applications/services, it adds to this implementation a new component called the Service Manager. The Service Manager is primarily responsible for the following actions related to services.

- Control service lifecycle of each service activated for the device
- Manage services
- Programmatic interface (API) for system management clients (local or remote) for control and management of services

4. Dynamic services provisioning

Operating within the end-to-end DCS platform the DMA-enabled devices and DCS application server allows services provisioning and management by application server hosted by a third-party service provider. The DMA-enabled devices and application servers collaborate to provide dynamic provisioning. Using this system a customer would be able to review a set of applications, select or customize one or more applications to fit. In order to cover new and existing (MIF) device base, the architecture of DMA allows its deployment in the following scenarios.

- Embedded in a networked device, such as a printer or multifunction device.
- Embedded in a specialized hardware for standalone devices such as a copier or for existing devices in field.
- Embedded in network application either as a single device proxy or multiple device proxy configurations.

### **The Office Action**

With regard to the last Office Action, mailed August 22, 2007, Claims 22-26 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mukaiyama et al. U.S. Patent No. 6,631,407 in view of Baller et al. U.S. Patent No. 7,254,601.

Claim 22 was objected to because it included reference characters which were not enclosed within parentheses.

### **The Cited References**

Mukaiyama et al. discloses a device management network system capable of monitoring the operation status of network devices in real time with a Web browser without wasting network resources. The device management network system includes a management server, client devices, and network devices to be managed. Each of the network devices transmits an SNMP trap indicating a change of its own operation status to the management server when a status change occurs (abstract).

Baller et al. discloses a method and system to manage intelligent equipment that is deployed remotely (abstract). The Baller et al. system can include a poller server to periodically poll an asset to retrieve status information relevant to the asset (col. 7, lines 36-46; col. 8, lines 19-50).

In contrast to the cited references, the presently claimed subject matter provides a distributed image processing system comprising a device model agent (DMA) disposed within the imaging device, wherein a DMA application program residing within the DMA performs dynamic updates of executable imaging device services. Further, the executable device services includes adding new service components that can be selectively subscribed to by the imaging device, via the DMA, and selectively initiated by the imaging device.

It is submitted that the prior art references cited, alone or in combination, do not disclose a distributed image processing system, as claimed, which includes an imaging device initiated feature which enables the imaging device to subscribe to and add service components.

For the reasons discussed above, the Examiner is respectfully requested to withdraw the rejection of claims 22, 23, 25 and 26.

In addition to amending claim 22 to more clearly describe the Applicants' claimed subject matter, claim 22 has been amended to include parenthesis enclosing the reference characters recited. Furthermore, claim 23 has been canceled and the previous subject matter of claim 23 has been included in currently amended claim 22.

The other cited references have also been considered but similarly, either individually or in combination, each lack presently claimed elements.

### CONCLUSION

For the reasons detailed above, it is submitted all remaining claims (Claims 22, 23, 25 and 26) are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination. ☒ Remaining Claims, as delineated below:

(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT LESS HIGHEST NUMBER PREVIOUSLY PAID FOR	(3) NUMBER EXTRA
TOTAL CLAIMS	4 - 20 =	0
INDEPENDENT CLAIMS	1 - 3 =	0

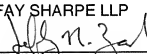
☒ This is an authorization under 37 CFR 1.136(a)(3) to treat any concurrent or future reply, requiring a petition for extension of time, as incorporating a petition for the appropriate extension of time.

☒ The Commissioner is hereby authorized to charge any filing or prosecution fees which may be required, under 37 CFR 1.16, 1.17, and 1.21 (but not 1.18), or to credit any overpayment, to Deposit Account 24-0037. (A Request for Extension of Time is being paid for with a credit card. A separate Request for Extension of Time is attached.)

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Jeffrey N. Zahn, at Telephone Number (216) 861-5582.

Respectfully submitted,

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December 26, 2007  
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Date